The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A tablet cooling apparatus for cooling tablets after the tablets have been formed in a tablet press, comprising:

a conduit defining a passageway, having an inlet and an outlet, the outlet adapted to receive tablets from the tablet press, the conduit being oriented and arranged so that the tablets will pass from the inlet to the outlet;

a coolant inlet coupled to the conduit for supplying coolant to the passageway; and

a coolant source for supplying coolant to the coolant inlet, the coolant source being in flow communication with the coolant inlet, the coolant inlet being positioned in the conduit so that the coolant is supplied to at least a portion of the passageway so that the tablets are bathed in coolant as they travel from the conduit inlet to the conduit outlet.

2. The tablet cooling apparatus of Claim 1, wherein the conduit includes a chute cover and an open top tablet chute, the chute cover is coupled to the open top tablet chute to define the passageway.

3. The tablet cooling apparatus of Claim 1, further including a temperature sensing device connected to the conduit for the detection of temperature within the passageway.

4. The tablet cooling apparatus of Claim 1, further including a valve, the valve being in coolant flow communication between the coolant inlet and the coolant source, and wherein the valve controls the flow of coolant to the passageway.

5. The tablet cooling apparatus of Claim 4, further including a temperature sensing device and a control device, the temperature sensing device being connected to the conduit for the detection of temperature within the passageway, wherein the temperature sensing device sends an output signal to the control device, the control device being associated with the valve, and wherein the control device regulates the flow of coolant to the passageway in response to the temperature sensing device output signal by adjusting the valve.

6. The tablet cooling apparatus of Claim 1, further including a fan connected to the conduit along the passageway, wherein the fan stimulates the flow of gas through the passageway.

7. The tablet cooling apparatus of Claim 1, wherein the conduit is insulated.

8. A tablet cooling apparatus for cooling tablets after the tablets have been formed in a tablet press having a tablet outlet, comprising:

a container having an outer surface, an inner surface, a bottom portion, and a top lid portion defining an at least partially enclosed space, wherein the top lid portion is hingedly connected to the bottom portion, wherein the enclosed space is capable of containing coolant;

wherein the container is in flow communication with the tablet outlet and is capable of receiving tablets into the enclosed space;

a coolant inlet coupled to the container for supplying coolant to the enclosed space; and

a coolant source for supplying coolant to the coolant inlet, the coolant source being in flow communication with the coolant inlet.

9. The tablet cooling apparatus of Claim 8, further including a tablet inlet, the tablet inlet passing through the container outer surface to the inner surface, wherein the tablet inlet is in flow communication with the tablet press tablet outlet and is capable of receiving tablets.

10. The tablet cooling apparatus of Claim 8, further including a hopper for removing tablets from the container and separating coolant from the removed tablets, the hopper having a bottom surface for retaining tablets and at least one aperture for releasing coolant.

11. The tablet cooling apparatus of Claim 10, wherein the hopper further includes a handle for manually lifting the hopper in and out of the container.

12. The tablet cooling apparatus of Claim 10, further including a temperature sensing device connected to the container for the detection of temperature within the enclosed space.

13. The tablet cooling apparatus of Claim 10, further including a valve, the valve being in coolant flow communication between the coolant inlet and the coolant source, and wherein the valve controls the flow of coolant to the enclosed space.

14. The tablet cooling apparatus of Claim 10, further including a temperature sensing device and a control device, the temperature sensing device being connected to the container for the detection of temperature within the enclosed space, wherein the temperature sensing device sends an output signal to the control device, the control device being associated with the valve, and wherein the control device regulates the flow of coolant to the enclosed space in response to the temperature sensing device output signal by adjusting the valve.